

=> fil reg

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STRUCTURE FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2
 DICTIONARY FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

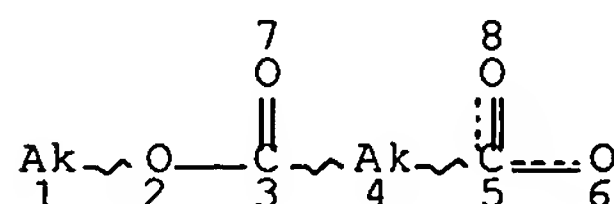
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REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d que stat 128

L23 STR



NODE ATTRIBUTES:

CONNECT IS E1 RC AT 1
 DEFAULT MLEVEL IS ATOM
 GGCAT IS SAT AT 1
 GGCAT IS SAT AT 4
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L26 SCR 2043 OR 2127 OR 1918 OR 1838
 L28 26130 SEA FILE=REGISTRY SSS FUL L23 NOT L26

100.0% PROCESSED 140477 ITERATIONS (4 INCOMPLETE) 26130 ANSWERS
 SEARCH TIME: 00.00.04

=> d his nofile

(FILE 'HOME' ENTERED AT 15:25:54 ON 11 DEC 2007)

FILE 'HCAPLUS' ENTERED AT 15:26:08 ON 11 DEC 2007

L1 1 SEA ABB=ON PLU=ON US2006178283/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 15:26:34 ON 11 DEC 2007

L2 5 SEA ABB=ON PLU=ON (102-76-1/BI OR 106-65-0/BI OR
124-38-9/BI OR 627-93-0/BI OR 6525-53-7/BI)
D SCA

FILE 'LREGISTRY' ENTERED AT 15:35:17 ON 11 DEC 2007

L3 STR

FILE 'REGISTRY' ENTERED AT 15:42:25 ON 11 DEC 2007

L4 SCR 2043 OR 2127
L5 50 SEA SSS SAM L3 NOT L4
L6 STR L3
L7 50 SEA SSS SAM L6 NOT L4
L8 SCR 1918 OR 1929 OR 2016 OR 2026 OR 2021
L9 50 SEA SSS SAM L6 NOT L4 NOT L8
L10 SCR 1918 OR 1929 OR 2016 OR 2026 OR 2021 OR 1573
L11 50 SEA SSS SAM L6 NOT L4 NOT L10
L12 SCR 1918 OR 1929 OR 2016 OR 2026 OR 2021 OR 1573 OR 1701
L13 50 SEA SSS SAM L6 NOT L4 NOT L12
L14 50 SEA SSS SAM L3 NOT L4 NOT L8
L15 SCR 1918 OR 1929 OR 2016 OR 2026 OR 2021 OR 1838
L16 50 SEA SSS SAM L3 NOT L4 NOT L15
L17 STR
L18 50 SEA SSS SAM L3 NOT L17 NOT L4 NOT L15
L19 STR L3
L20 50 SEA SSS SAM L19 NOT L4 NOT L15
L21 SCR 1918 OR 1929 OR 2016 OR 2026 OR 2021 OR 1838 OR 2040
L22 50 SEA SSS SAM L19 NOT L4 NOT L21

FILE 'LREGISTRY' ENTERED AT 16:06:21 ON 11 DEC 2007

L23 STR

FILE 'REGISTRY' ENTERED AT 16:08:49 ON 11 DEC 2007

L24 SCR 2043 OR 2127 OR 1918
L25 50 SEA SSS SAM L23 NOT L24
L26 SCR 2043 OR 2127 OR 1918 OR 1838
L27 50 SEA SSS SAM L23 NOT L26
L28 26130 SEA SSS FUL L23 NOT L26
L29 3 SEA ABB=ON PLU=ON L2 AND L28
SAV L28 TEMP ASD921/A
E CARBON DIOXIDE/CN
L30 1 SEA ABB=ON PLU=ON "CARBON DIOXIDE"/CN

FILE 'HCAPLUS' ENTERED AT 16:13:54 ON 11 DEC 2007

L31 12897 SEA ABB=ON PLU=ON (L30 OR CO2 OR CARBON(W)DIOXIDE) (5A) (LIQ# OR LIQUID? OR LIQU!F?)
L32 72253 SEA ABB=ON PLU=ON L28
L33 35 SEA ABB=ON PLU=ON L31 AND L32
L34 QUE ABB=ON PLU=ON WEIGHT OR WT##
L35 4 SEA ABB=ON PLU=ON L33 AND L34
L36 QUE ABB=ON PLU=ON (CLEAN? OR LAUND?) (3A) (ADDITIVE? OR ADJUVANT? OR AUXILIAR? OR MEDIUM?)
L37 11 SEA ABB=ON PLU=ON L31 AND L36
L38 3 SEA ABB=ON PLU=ON L37 AND L34
L39 6 SEA ABB=ON PLU=ON L35 OR L38
L40 QUE ABB=ON PLU=ON ?CLEAN? OR LAUND?

L41 2 SEA ABB=ON PLU=ON L33 AND L40
L42 7 SEA ABB=ON PLU=ON L39 OR L41
L43 30 SEA ABB=ON PLU=ON L33 NOT L42
L44 24 SEA ABB=ON PLU=ON L43 AND (PY<=2002 OR PRY<=2003 OR
AY<=2003)

FILE 'WPIX' ENTERED AT 16:29:54 ON 11 DEC 2007

E US20060178283/PN

L45 1 SEA ABB=ON PLU=ON US20060178283/PN
D IFULL
L46 5151 SEA ABB=ON PLU=ON (CO2 OR CARBON(W)DIOXIDE) (3A) (LIQ#
OR LIQUID? OR LIQU!F?)
L47 27 SEA ABB=ON PLU=ON L46 AND L36
L48 9 SEA ABB=ON PLU=ON L47 AND L34

FILE 'COMPENDEX' ENTERED AT 16:33:13 ON 11 DEC 2007

L49 3 SEA ABB=ON PLU=ON L46 AND L36
D SCA
L50 0 SEA ABB=ON PLU=ON L49 AND L34

FILE 'JAPIO' ENTERED AT 16:34:19 ON 11 DEC 2007

L51 2 SEA ABB=ON PLU=ON L46 AND L36
D SCA

FILE 'PASCAL' ENTERED AT 16:35:21 ON 11 DEC 2007

L52 0 SEA ABB=ON PLU=ON L46 AND L36

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 16:37:27 ON 11 DEC 2007

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FILE COVERS 1907 - 11 Dec 2007 VOL 147 ISS 25

FILE LAST UPDATED: 10 Dec 2007 (20071210/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l42 ibib abs hitstr hitind 1-7

L42 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:169491 HCAPLUS Full-text

DOCUMENT NUMBER: 144:256872

TITLE: Gelled liquid hydrocarbon treatment fluids

having reduced phosphorus volatility and their associated methods of use and preparation

INVENTOR(S): Funkhouser, Gary P.

PATENT ASSIGNEE(S): Halliburton Energy Services, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 11 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006037754	A1	20060223	US 2004-920821	20040818
US 7066262	B2	20060627		
CA 2514140	A1	20060218	CA 2005-2514140	20050729
PRIORITY APPLN. INFO.:			US 2004-920821	A 20040818

OTHER SOURCE(S): MARPAT 144:256872

AB This invention relates to reduced volatility gelled liquid hydrocarbon treatment fluids and methods of their use and preparation. In one embodiment, this invention provides a method of treating a portion of a subterranean formation comprising: providing a reduced volatility gelled liquid hydrocarbon treatment fluid that comprises a liquid hydrocarbon and a gelling agent that comprises a polyvalent metal salt of a phosphoric acid ester, and treating the portion of the subterranean formation with the reduced volatility gelled liquid hydrocarbon treatment fluid. In another embodiment, this invention provides a gelled liquid hydrocarbon treatment fluid: that comprises a liquid hydrocarbon and a gelling agent that comprises a polyvalent metal salt of a phosphoric acid ester; that has a concentration of less than about 250 mg/L of trialkyl phosphate esters that have a mol. weight of less than about 350; and that has a diester-to-monoester content molar ratio of at least about 2:1.

IT 124-38-9, Carbon dioxide, uses
2373-23-1, Dioctyl sulfosuccinate

RL: TEM (Technical or engineered material use); USES (Uses)
(gelled liquid hydrocarbon treatment fluids having reduced phosphorus volatility and their associated methods of use and preparation)

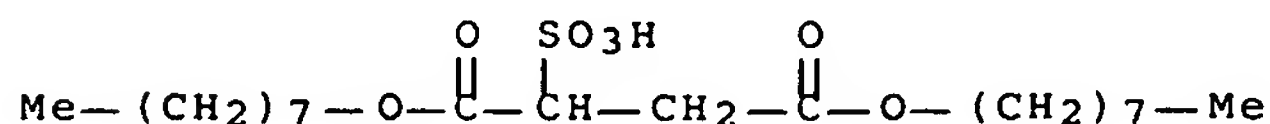
RN 124-38-9 HCAPLUS

CN Carbon dioxide (CA INDEX NAME)



RN 2373-23-1 HCAPLUS

CN Butanedioic acid, 2-sulfo-, 1,4-dioctyl ester (CA INDEX NAME)



INCL 166308100; 166312000

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

IT 50-81-7, Ascorbic acid, uses 60-24-2, 2-Mercaptoethanol 68-11-1,
Thioglycolic acid, uses 102-71-6, Triethanolamine, uses
102-81-8, N,N-Dibutyl ethanol amine 124-38-9,
Carbon dioxide, uses 128-04-1, Sodium
dimethyldithiocarbamate 148-18-5, Sodium diethyldithiocarbamate
1184-66-3 1309-48-4, Magnesium oxide, uses 2373-23-1,
Dioctyl sulfosuccinate 4450-94-6, Monoammonium citrate 5470-11-1
7681-11-0, Potassium iodide, uses 7681-53-0, Sodium hypophosphite
7732-18-5, Water, uses 7757-83-7, Sodium sulfite 7772-98-7,
Sodium thiosulfate 7772-99-8, Stannous chloride, uses 7775-14-6,
Sodium dithionite 28299-33-4, Imidazoline 51344-62-8

RL: TEM (Technical or engineered material use); USES (Uses)

(gelled liquid hydrocarbon treatment fluids having
reduced phosphorus volatility and their associated methods of use
and preparation)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L42 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:965450 HCAPLUS Full-text

DOCUMENT NUMBER: 141:397321

TITLE: Use of prespotters to improve the textile
cleaning performance of dry
cleaning systems

INVENTOR(S): Motson, Harold Russell

PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK

SOURCE: PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004097103	A2	20041111	WO 2004-GB1768	200404 26
WO 2004097103	A3	20050120		
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RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2522643	A1	20041111	CA 2004-2522643	200404 26

EP 1618244	A2	20060125	EP 2004-729462	200404 26
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2006526082	T	20061116	JP 2006-506178	200404 26
US 2007267045	A1	20071122	US 2007-554781	200703 16
PRIORITY APPLN. INFO.:			GB 2003-9755	A 200304 29
			GB 2003-18659	A 200308 08
			GB 2003-18698	A 200308 08
			WO 2004-GB1768	W 200404 26

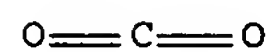
OTHER SOURCE(S): MARPAT 141:397321

AB The cleaning performance of dry cleaning systems based on liquid CO₂ is improved by 1st treating soiled areas of the textile with ≥1 prespotter material which is an polyoxyalkylene alkyl ether, e.g., Atlas G 5000, or a benzoate ester, e.g., 2-ethylhexyl benzoate. The textiles are subsequently dry-cleaned in a medium based on liquid CO₂, typically also including a cleaning additive, particularly a dicarboxylate ester. The textile may also be treated with a fabric conditioner, particularly a fatty alc. or fatty acid branched polyalkoxylate which may be included in the dry cleaning medium or in a subsequent rinse cycle.

IT 124-38-9, Carbon dioxide, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (liquid; use of prespotters to improve textile
 cleaning performance of dry cleaning systems)

RN 124-38-9 HCAPLUS

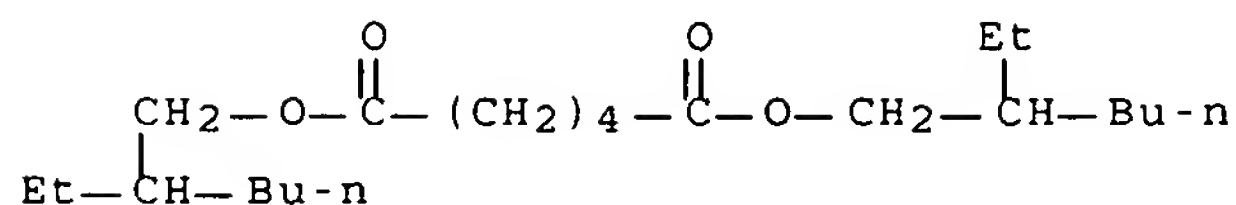
CN Carbon dioxide (CA INDEX NAME)



IT 103-23-1, Di(2-ethylhexyl) adipate 105-97-5,
 Didecyl adipate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (use of prespotters to improve textile cleaning
 performance of dry cleaning systems)

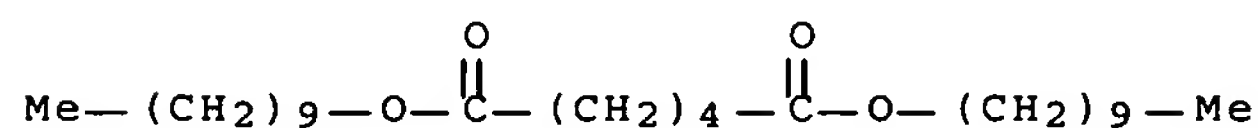
RN 103-23-1 HCAPLUS

CN Hexanedioic acid, 1,6-bis(2-ethylhexyl) ester (CA INDEX NAME)



RN 105-97-5 HCAPLUS

CN Hexanedioic acid, 1,6-didecyl ester (CA INDEX NAME)



IC ICM D06L001-00

CC 46-6 (Surface Active Agents and Detergents)

ST textile cleaning liq carbon

dioxide prespotter polyoxyalkylene alkyl ether; ethylhexyl
benzoate prespotter textile cleaning liq
carbon dioxide

IT Surfactants

(anionic; use of prespotters to improve textile cleaning
performance of dry cleaning systems)

IT Detergents

(cleaning compns., prespotters; use of prespotters to
improve textile cleaning performance of dry
cleaning systems)

IT Carboxylic acids, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(dicarboxylic, esters; use of prespotters to improve textile
cleaning performance of dry cleaning systems)

IT Detergents

(laundry, prespotters; use of prespotters to improve
textile cleaning performance of dry cleaning
systems)

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(mono(alkyl group)-terminated; use of prespotters to improve
textile cleaning performance of dry cleaning
systems)

IT Surfactants

(nonionic; use of prespotters to improve textile cleaning
performance of dry cleaning systems)

IT 124-38-9, Carbon dioxide, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(liquid; use of prespotters to improve textile
cleaning performance of dry cleaning systems)

IT 103-23-1, Di(2-ethylhexyl) adipate 105-97-5,

Didecyl adipate 5444-75-7, 2-Ethylhexyl benzoate 9038-95-3,
Ethylene oxide-Propylene oxide copolymer monobutyl ether
27178-16-1, Diisodecyl adipate 99821-01-9, Atlas G 5000

RL: TEM (Technical or engineered material use); USES (Uses)
(use of prespotters to improve textile cleaning
performance of dry cleaning systems)

DOCUMENT NUMBER: 140:219311
 TITLE: Liquid carbon
 dioxide dry cleaning system using fatty
 branched polyalkoxylate fabric conditioning
 agents
 INVENTOR(S): Motson, Harold Russell; Irvine, Derek John;
 Huntley, Steven
 PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK
 SOURCE: PCT Int. Appl., 16 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004018764	A1	20040304	WO 2002-GB3828	200208 20
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2495217	A1	20040304	CA 2002-2495217	200208 20
AU 2002321505	A1	20040311	AU 2002-321505	200208 20
EP 1546448	A1	20050629	EP 2002-755209	200208 20
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005535797	T	20051124	JP 2004-530317	200208 20
US 2006107467	A1	20060525	US 2005-525042	200508 29
PRIORITY APPLN. INFO.:			WO 2002-GB3828	W 200208 20

OTHER SOURCE(S): MARPAT 140:219311

AB The dry cleaning method comprises the steps of (I) conditioning textile materials with a treatment medium based on liquid CO₂ containing 0.001-2.5 wt% of the treatment medium of a conditioning agent which includes at least one fatty alc. or fatty acid branched polyalkyloxylate, shown by R1O(AO)mR2 (e.g., C24 guerbet alc. 5-propoxylate), where R1 is C8 to C30 aliphatic hydrocarbyle or acyl; AO is predominantly branched alkyleneoxy, particularly propyleneoxy;

m is from 2 to 50; and R2 is H or a is C1 to C4 aliphatic hydrocarbyl or acyl. The cleaning medium may include detergent surfactant and/or non-surfactant cleaning additive or may be free from such additives in which case the treatment can be provided in a rinse cycle in a cleaning process.

IT 124-38-9, Carbon dioxide, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (liquid; method of dry cleaning using liquid
 carbon dioxide and fatty branched
 polyalkoxylate conditioning agents)
 RN 124-38-9 HCAPLUS
 CN Carbon dioxide (CA INDEX NAME)



IC ICM D06L001-00
 CC 40-9 (Textiles and Fibers)
 ST liq carbon dioxide dry cleaning fatty
 branched polyalkoxylate
 IT Fatty acids, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (alkoxylated, branched, fabric softeners; method of dry cleaning
 using liquid carbon dioxide and fatty
 branched polyalkoxylate conditioning agents)
 IT Fatty acids, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (branched, alkoxylated, fabric softeners; method of dry cleaning
 using liquid carbon dioxide and fatty
 branched polyalkoxylate conditioning agents)
 IT Textiles
 (cotton; method of dry cleaning using liquid
 carbon dioxide and fatty branched
 polyalkoxylate conditioning agents)
 IT Polyester fibers, miscellaneous
 RL: MSC (Miscellaneous)
 (fabrics; method of dry cleaning using liquid
 carbon dioxide and fatty branched
 polyalkoxylate conditioning agents)
 IT Alcohols, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (fatty, alkoxylated, branched, fabric softeners; method of dry
 cleaning using liquid carbon dioxide
 and fatty branched polyalkoxylate conditioning agents)
 IT Dry cleaning
 Fabric softeners
 Textiles
 (method of dry cleaning using liquid carbon
 dioxide and fatty branched polyalkoxylate conditioning
 agents)
 IT Polyoxyalkylenes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (mono(fatty acyl)-terminated, branched, fabric softeners; method
 of dry cleaning using liquid carbon
 dioxide and fatty branched polyalkoxylate conditioning
 agents)
 IT 124-38-9, Carbon dioxide, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (liquid; method of dry cleaning using liquid

carbon dioxide and fatty branched
polyalkoxylate conditioning agents)

IT 287473-87-4, Propoxylated C24 guerbet alcohol

RL: TEM (Technical or engineered material use); USES (Uses)
(oligomeric, fabric softeners; method of dry cleaning using
liquid carbon dioxide and fatty
branched polyalkoxylate conditioning agents)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L42 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:3092 HCAPLUS Full-text

DOCUMENT NUMBER: 140:61003

TITLE: Drycleaning of textiles using
liquid carbon dioxide
and cleaning additives

INVENTOR(S): Motson, Harold Russell; Irvine, Derek John;
Appleman, Eric

PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK

SOURCE: PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004001120	A1	20031231	WO 2002-GB2846	200206 24
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2488664	A1	20031231	CA 2002-2488664	200206 24
AU 2002311463	A1	20040106	AU 2002-311463	200206 24
EP 1516083	A1	20050323	EP 2002-738380	200206 24
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JP 2005530883	T	20051013	JP 2004-514992	200206 24
CA 2488569	A1	20031231	CA 2003-2488569	200306 24

WO 2004001119 A2 20031231 WO 2003-GB2703 200306
24

WO 2004001119 A3 20040902
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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
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NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
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SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

AU 2003244807 A1 20040106 AU 2003-244807 200306
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EP 1518017 A2 20050330 EP 2003-738287 200306
24

EP 1518017 B1 20070725
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
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SK

JP 2005530884 T 20051013 JP 2004-515057 200306
24

AT 368145 T 20070815 AT 2003-738287 200306
24

US 2005288201 A1 20051229 US 2005-518916 200507
27

US 2006178283 A1 20060810 US 2005-518921 200507
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PRIORITY APPLN. INFO.: WO 2002-GB2846 W 200206
24

WO 2003-GB2703 W 200306
24

OTHER SOURCE(S): MARPAT 140:61003

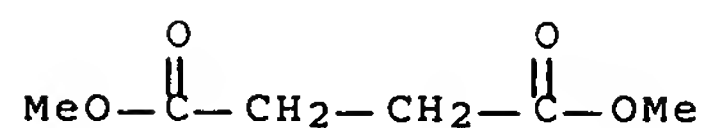
AB Detergent- or micelle-free cleaning media based on detergent-free and/or micelle-free liquid CO₂ and including 0.01-5 wt% of the formulation of a cleaning additive which is ≥ 1 multi-ester having a mol. weight of ≤ 750 can be used in dry cleaning of textiles. Desirable cleaning additives are of the formula: $R_1(XR_2)_n$ where X, R₁, R₂, and n have defined meanings, particularly to be esters of multi-carboxylic acids and mono-hydroxy alcs. or esters of mono-carboxylic acids and multi-hydroxy alcs.

IT 106-65-0, Dimethyl succinate 627-93-0, Dimethyl adipate 6525-53-7, Dimethyl glutamate

RL: NUU (Other use, unclassified); USES (Uses)
(drycleaning of textiles using liquid carbon dioxide and cleaning additives)

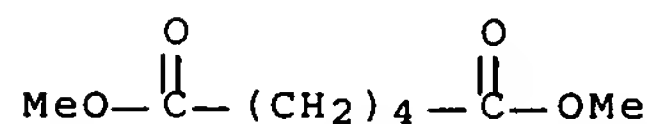
RN 106-65-0 HCAPLUS

CN Butanedioic acid, 1,4-dimethyl ester (CA INDEX NAME)



RN 627-93-0 HCAPLUS

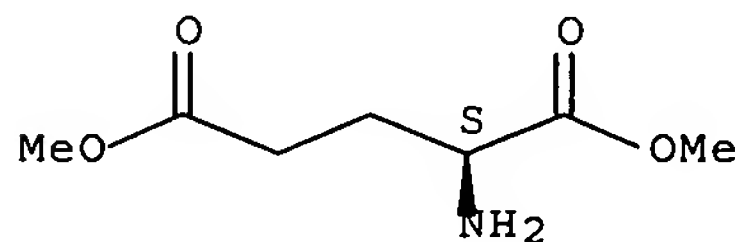
CN Hexanedioic acid, 1,6-dimethyl ester (CA INDEX NAME)



RN 6525-53-7 HCAPLUS

CN L-Glutamic acid, 1,5-dimethyl ester (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 124-38-9, Carbon dioxide, uses

RL: NUU (Other use, unclassified); USES (Uses)
(liq; drycleaning of textiles using
liquid carbon dioxide and
cleaning additives)

RN 124-38-9 HCAPLUS

CN Carbon dioxide (CA INDEX NAME)



IC ICM D06L001-00

CC 40-8 (Textiles and Fibers)

ST liq carbon dioxide dimethyl adipate
glutamate succinate drycleaning textile

IT Dry cleaning
(drycleaning of textiles using liquid
carbon dioxide and cleaning
additives)

IT 102-76-1, Triacetin 106-65-0, Dimethyl succinate
627-93-0, Dimethyl adipate 6525-53-7, Dimethyl
glutamate

RL: NUU (Other use, unclassified); USES (Uses)
(drycleaning of textiles using liquid
carbon dioxide and cleaning
additives)

IT 124-38-9, Carbon dioxide, uses

RL: NUU (Other use, unclassified); USES (Uses)

(liq; drycleaning of textiles using
liquid carbon dioxide and
cleaning additives)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L42 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:561501 HCAPLUS Full-text
DOCUMENT NUMBER: 131:186881
TITLE: Cleaning process using carbon dioxide as a
solvent and employing molecularly engineered
amphiphilic surfactants
INVENTOR(S): Desimone, Joseph M.; Romack, Timothy; Betts,
Douglas E.; McClain, James B.
PATENT ASSIGNEE(S): The University of North Carolina at Chapel Hill,
USA
SOURCE: U.S., 8 pp., Cont.-in-part of U.S. 5,783,082.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 5944996	A	19990831	US 1997-850371	199705 02
US 5783082	A	19980721	US 1995-553082	199511 03
US 6224774	B1	20010501	US 1999-249701	199902 12
PRIORITY APPLN. INFO.:			US 1995-553082	A2 199511 03
			US 1997-850371	A1 199705 02

AB A contaminant (e.g., inorg. compds., organic compds., polymers, particles) is separated from a substrate (e.g., a polymer, metal, ceramic, glass, or composite) that carries the contaminant by contacting the substrate with a CO₂ fluid (a liq. at <31°C, high-pressure gas at 20-73 bar, or high-temperature supercrit. gas) containing 0.001-30 weight% of an amphiphilic species so that the contaminant assoc. with the amphiphilic species and becomes entrained in the CO₂ fluid. The CO₂ serves as a second fluid to facilitate the transport of the contaminant from the substrate. The substrate is separated from the CO₂ fluid, and then the contaminant is separated from the CO₂ fluid. In an example, polystyrene was removed from an aluminum vessel using poly(1,1'-dihydroperfluorooctylacrylate)-b-6.6 kg/mol polystyrene block copolymer and CO₂ (at 200 bar, 40°C).

IC ICM B01D011-00

INCL 210634000

CC 48-11 (Unit Operations and Processes)

IT Polysiloxanes, uses

RL: MOA (Modifier or additive use); USES (Uses)
 (di-Me, ethoxylated, cleaning additive;
 cleaning process using CO2 containing molecularly engineered
 amphiphilic surfactants)

IT Liquids

(oils, contaminates; cleaning process using CO2 containing
 molecularly engineered amphiphilic surfactants)

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L42 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:280724 HCAPLUS Full-text

DOCUMENT NUMBER: 124:311788

TITLE: Glass capillary-enclosed carbon dioxide- and
 proton-permeable membrane-based carbon
 dioxide-sensitive microelectrodes

INVENTOR(S): Voipio, Juha Tuuri Immanuel

PATENT ASSIGNEE(S): Finland

SOURCE: Finn., 9 pp.

CODEN: FIXXAP

DOCUMENT TYPE: Patent

LANGUAGE: Finnish

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FI 96140	B	19960131	FI 1993-1986	199305 03
FI 9301986	A	19941104		
FI 96140	C	19960510		
PRIORITY APPLN. INFO.:			FI 1993-1986	199305 03

AB The filling solution in the micropipets contains carbonanhydrase enzyme and the sensor solution contains dissolved PVC, whereby a short response time is obtained. The sensor solution contains tridodecylamine 4.5, K tetrakis(4-chlorophenyl)borate 2.1, bis(1-butylpentyl)adipate 79.4, and poly(vinyl chloride) 14.0 weight%, dissolved in THF. Alternatively, the sensor solution contains tridodecylamine 8.6, Na tetraphenylborate 0.6, 2-nitrophenyl octyl ether 76.8, and poly(vinyl chloride) 14.0 weight%, dissolved in THF. The microelectrodes are used for determining the amount of dissolved CO2 in the liquid of organisms and biol. tissues.

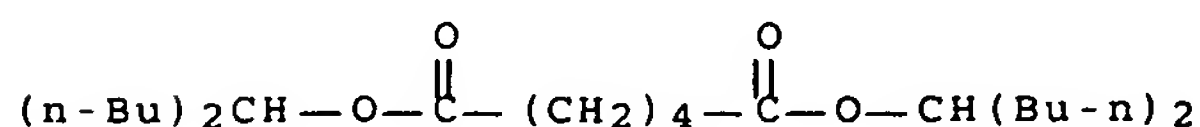
IT 77916-77-9, Bis(1-butylpentyl)adipate

RL: TEM (Technical or engineered material use); USES (Uses)

(glass capillary-enclosed carbon dioxide- and proton-permeable
 membrane-based carbon dioxide-sensitive microelectrodes)

RN 77916-77-9 HCAPLUS

CN Hexanedioic acid, 1,6-bis(1-butylpentyl) ester (CA INDEX NAME)



IC ICM G01N027-30
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 79
ST microelectrode carbon dioxide detn; organism liq
carbon dioxide detn; biol tissue carbon dioxide
detn
IT 102-87-4, Tridodecylamine 143-66-8, Sodium tetraphenylborate
9002-86-2, Poly(vinyl chloride) 14680-77-4, Potassium
tetrakis(4-chlorophenyl)borate 37682-29-4, 2-Nitrophenyl octyl
ether 77916-77-9, Bis(1-butylpentyl)adipate
RL: TEM (Technical or engineered material use); USES (Uses)
(glass capillary-enclosed carbon dioxide- and proton-permeable
membrane-based carbon dioxide-sensitive microelectrodes)

L42 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1951:52761 HCAPLUS Full-text

DOCUMENT NUMBER: 45:52761

ORIGINAL REFERENCE NO.: 45:8984c-h

TITLE: Some fundamental organic reactions. VIII. The
Bouveault-Locquin lactone-trimethylene-ring
rearrangement

AUTHOR(S): Matsui, Masanao; Hirase, Susumu

CORPORATE SOURCE: Kyoto Univ.

SOURCE: Nippon Kagaku Kaishi (1921-47) (1950), 71(Pure
Chem. Sect.), 426-30

CODEN: NIKWAB; ISSN: 0369-4208

DOCUMENT TYPE: Journal

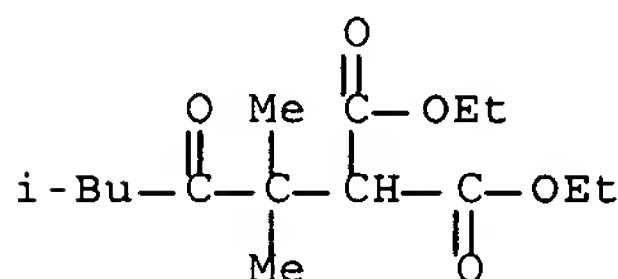
LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 45:52761

AB cf. C.A. 45, 6593b. Bouveault and Locquin (C.A. 4, 915) reported that
condensation of butyroin (I) with AcOEt by means of Na gave a product (II),
C₁₀H₁₆O₂, which was regarded as a lactone, and that II was converted by CH₂N₂
to a compound (III), C₁₁H₁₈O₂, which was assigned the structure of Me 2,3-
dipropyl-1-cyclopropene-1-carboxylate. M. and H. concluded on the basis of
the following syntheses and observations that II is 2-ethyl-4-propyl-1,3-
cyclopentanedione (IV) or its enolic form and III is a Me ether of II. II,
C₁₀H₁₆O₂ (mol. weight found 171), colorless crystals, m. 114.5-16°, b₆ 180-6°,
soluble in aqueous Na₂CO₃ with evolution of CO₂, gradually liquefied, turning
yellow, on keeping for a long time, reduced hot Fehling solution, and gave a
reddish brown coloration with FeCl₃ in 50% alc.; 2,4-dinitrophenylhydrazone,
m. 186-7°; monoacetate, C₁₂H₁₈O₃, b₇ 121-3°. SOCl₂ with II in CCl₄ gave
C₁₀H₁₅OCl, b₇ 88°. Br was decolorized by II in CHCl₃ with evolution of HBr,
and the bromination product, which was very unstable, regenerated II on
treatment with Zn dust in MeOH. Ozonolysis of both II and III, C₁₁H₁₈O₂, b₆
132-5°, gave EtCO₂H and α-propylsuccinic acid, m. 91-2°. I (62 g.), 180 g.
Ac₂O, and 20 g. fused AcONa were refluxed 3 h., giving 72 g. acetylbutyroin,
C₁₀H₁₈O₃, b₇ 90-2°, d₄ 0.9634, n_D 1.4330. This (20 g.) subjected to the
Reformatskii reaction with 16 g. CH₂BrCO₂Me and 14 g. Zn in 20 cc. C₆H₆, gave
13.5 g. of a crude product, b₆ 145-55°. Further fractionation gave Me 3-
acetoxy-2-propyl-2-hexene-1-carboxylate, C₁₃H₂₂O₄, b₈ 148-50°, which was
saponified with 30% alc. KOH to β-butyrylcaproic acid, b₅, 149-50°;
semicarbazone, m. 149-50.5° (from alc.). This acid with CH₂N₂ in ether gave
the Me ester (V), b₇ 106-8°. The action of 0.95 g. powdered Na on 4 g. V in
100 cc. hot ether for 6 h. gave IV, m. 114-16°, identical with II. Di-Et
2,2,5,5-tetramethyl-3-pentanone-1,1-dicarboxylate, b₆ 130-4°, was prepared by
heating 46 g. CH₂(CO₂Et)₂, 60 g. iso-BuCOBrMe₂ (Sacharowa, J. prakt. Chemical
[2] 88, 686(1913)), and 6.6 g. Na 3 h. in 100 cc. EtOH, and converted with 50%
aqueous NaOH to 2,2,5,5-tetramethyl-3-pentanone-1-carboxylic acid (VI), b₆
140-5°, m. 70.2-71.0° (from petr. ether); Me ester, b₇ 88-90°. VI (5 g.) was

boiled 1 h. with 15 g. Ac₂O, yielding β,β-dimethyl-γ-isobutylidenebutylolactone (VII), C₁₀H₁₆O₂, b₁₈ 110-13°, d₂₉₄ 0.9507, n_{29D} 1.4439. By boiling with 25% alc. KOH VII was hydrolyzed to VI. CH₂N₂ and VII in ether did not react, contrary to the expectation according to B. and L. It was concluded that the condensation of acyloins with AcOEt by means of Na proceeds by way of intermediate γ-ketocarboxylic esters, which subsequently undergo the intramol. Claisen condensation, giving 1,3-cyclopentanediones.

IT 92791-66-7P, Malonic acid, (1,1,4-trimethyl-2-oxopentyl)-, diethyl ester
 RL: PREP (Preparation)
 (preparation of)
 RN 92791-66-7 HCAPLUS
 CN Malonic acid, (1,1,4-trimethyl-2-oxopentyl)-, diethyl ester (7CI)
 (CA INDEX NAME)



CC 10 (Organic Chemistry)
 IT 91007-07-7P, Heptanoic acid, 3,3,6-trimethyl-4-oxo-
 92791-66-7P, Malonic acid, (1,1,4-trimethyl-2-oxopentyl)-, diethyl ester 408334-11-2P, 4-Octanone, 5-hydroxy-, acetate 408525-61-1P, 3-Heptenoic acid, 4-hydroxy-3-propyl-, methyl ester, acetate 855384-58-6P, 1,2-Cyclobutanedimethanol, 1,2-dihydroxy-α,α,α',α'-tetraphenyl- 855897-62-0P, Heptanoic acid, 3,3,6-trimethyl-4-oxo-, methyl ester 859446-15-4P, 2-Cyclopenten-1-one, 3-chloro-2-ethyl-5-propyl- 859446-88-1P, 2-Cyclopenten-1-one, 2-ethyl-3-methoxy-5-propyl- 872307-60-3P, 4-Heptenoic acid, 4-hydroxy-3,3,6-trimethyl-, γ-lactone
 RL: PREP (Preparation)
 (preparation of)

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L44 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:162654 HCAPLUS Full-text
 DOCUMENT NUMBER: 140:217295
 TITLE: Preparation of ionic liquids containing a sulfonate anion
 INVENTOR(S): Davis, James H. Jr.; Moulton, Roger
 PATENT ASSIGNEE(S): Sachem, Inc., USA; University of South Alabama
 SOURCE: PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

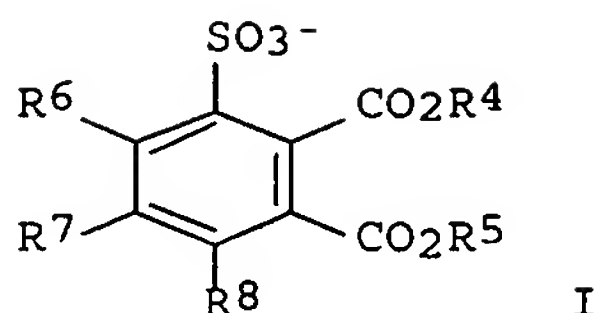
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WO 2004016570 A2 20040226 WO 2003-US25815
200308
15
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WO 2004016570 A3 20041125
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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM,
TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
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SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
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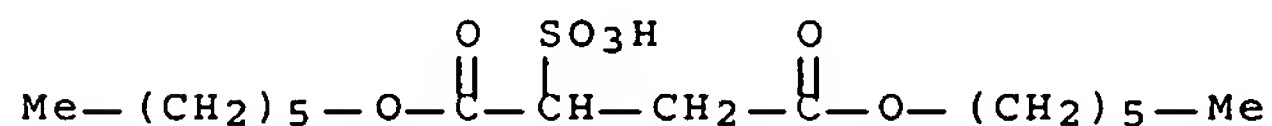
OTHER SOURCE(S):

MARPAT 140:217295

GI



- AB Claimed is an ionic liquid composition comprising a cation having >4 C atoms and an anion selected from $R_1O_2CCH(SO_3^-)R_3CO_2R_2$ and benzenesulfonate [I; R_1, R_2, R_4, R_5 = (substituted) alkyl, alkenyl; R_6, R_7, R_8 = H, alkyl, NO_2 , halo, cyano, silyl, OH; $R_1R_2, R_4R_5, R_6R_7, R_7R_8$ = atoms to form a ring]. Thus, Na docusate (docusate = di-2-ethylhexyl ester of sulfosuccinic acid) and Bu_4NBr were stirred in H_2O to give 94% tetrabutylammonium docusate. Fuel and polymer compns. containing title compds. are claimed.
- IT 23243-42-7, Dihexyl sulfosuccinate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of ionic liqs. containing a sulfonate anion)
- RN 23243-42-7 HCAPLUS
- CN Butanedioic acid, sulfo-, 1,4-dihexyl ester (9CI) (CA INDEX NAME)



- IC ICM C07C
- CC 23-17 (Aliphatic Compounds)
 Section cross-reference(s): 37, 51
- IT 577-11-7, Sodium docusate 1643-19-2, Tetrabutylammonium bromide
 23243-42-7, Dihexyl sulfosuccinate 154521-68-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of ionic liqs. containing a sulfonate anion)
- IT 124-38-9, Carbon dioxide, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (supercrit.; preparation of ionic liqs. containing a sulfonate anion)

L44 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:515735 HCAPLUS Full-text

DOCUMENT NUMBER: 137:95839

TITLE: Carbon dioxide refrigerant
 and liquid cofluid for use in a
 refrigeration cycle with wet compression

INVENTOR(S): Greenfield, Michael L.; Meyer, John J.;
 Mozurkewich, George, Jr.; Schneider, William F.;
 Stiel, Leonard I.

PATENT ASSIGNEE(S): Visteon Global Technologies, Inc., USA; Ford
 Global Technologies, Inc.

SOURCE: U.S., 9 pp.
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6415614	B1	20020709	US 2001-840337	20010423

PRIORITY APPLN. INFO.:

US 2001-840337

20010423

AB A carbon dioxide/cofluid mixture for use in a refrigeration cycle in which the carbon dioxide is alternately absorbed and desorbed from the cofluid consists of 50-95% of cofluid and 5-50% of CO₂. The cofluid has a thermal conductivity of > 0.14 W/m-K at 27°C. The cofluid can be preferably 3-pentanone, Me iso-Pr ketone, Et acetate, Pr acetate, cyclopentanone, cyclohexanone, propylene glycol diacetate, 1,5-pentanediol diacetate, di-Me malonate, di-Et malonate, di-Et succinate, di-Me glutarate, di-Me pimelate, di-Me Et malonate, di-Et Et malonate, di-Me Me succinate, diMe 3-Me glutarate, or their mixts.

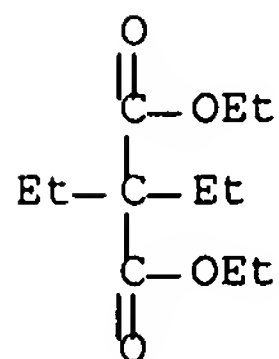
IT 77-25-8 105-53-3, Diethyl malonate
 106-65-0, Dimethyl succinate 108-59-8, Dimethyl malonate 123-25-1, Diethyl succinate 133-13-1
 141-28-6, Diethyl adipate 609-02-9
 609-08-5 627-73-6, Methyl ethyl succinate
 627-93-0, Dimethyl adipate 818-38-2, Diethyl glutarate 1117-19-7, Dipropyl malonate 1119-40-0
 , Dimethyl glutarate 1604-11-1, Dimethyl methylsuccinate 1619-62-1 1732-08-7, Dimethyl pimelate
 2050-20-6, Diethyl pimelate 4676-51-1, Diethyl methylsuccinate 6065-54-9 6186-89-6, Methyl ethyl malonate 13195-64-7, Diisopropyl malonate 17373-84-1 19550-58-4, Dimethyl 2,5-dimethyl adipate 19780-94-0, Dimethyl-2-methyladipate 26717-67-9 27132-23-6 32864-38-3
 42726-73-8

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(refrigerant; carbon dioxide refrigerant and liquid cofluid for use in a refrigeration cycle with wet compression)

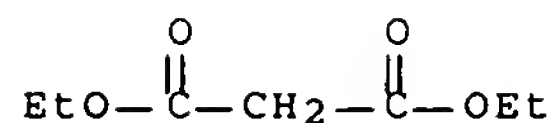
RN 77-25-8 HCAPLUS

CN Propanedioic acid, 2,2-diethyl-, 1,3-diethyl ester (CA INDEX NAME)



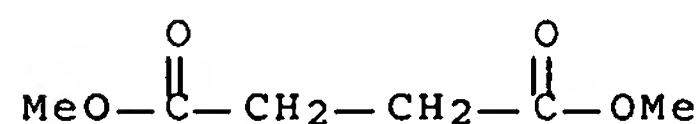
RN 105-53-3 HCAPLUS

CN Propanedioic acid, 1,3-diethyl ester (CA INDEX NAME)



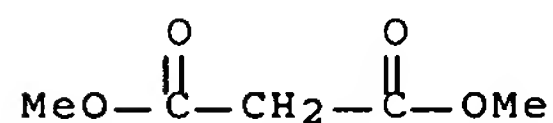
RN 106-65-0 HCAPLUS

CN Butanedioic acid, 1,4-dimethyl ester (CA INDEX NAME)



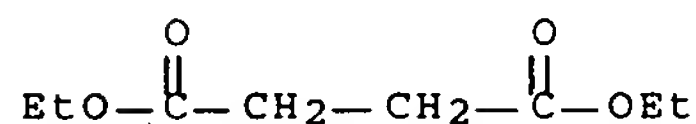
RN 108-59-8 HCAPLUS

CN Propanedioic acid, 1,3-dimethyl ester (CA INDEX NAME)



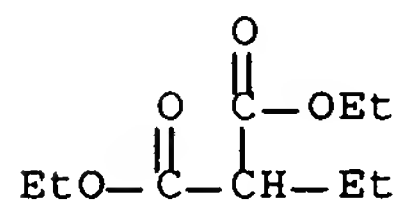
RN 123-25-1 HCAPLUS

CN Butanedioic acid, 1,4-diethyl ester (CA INDEX NAME)



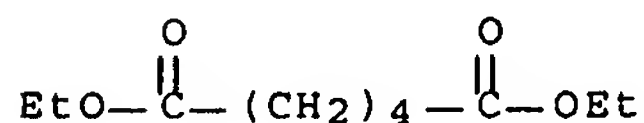
RN 133-13-1 HCAPLUS

CN Propanedioic acid, 2-ethyl-, 1,3-diethyl ester (CA INDEX NAME)



RN 141-28-6 HCAPLUS

CN Hexanedioic acid, 1,6-diethyl ester (CA INDEX NAME)



RN 609-02-9 HCAPLUS

CN Propanedioic acid, 2-methyl-, 1,3-dimethyl ester (CA INDEX NAME)